

communication between the host unit and the one or more additional host units; and
generating a floor plan for the building based on the determined distance(s) from the host unit to the one or more additional host units.

12. The method of claim **11** further comprising:
receiving and housing, by the host unit, an accessory,
wherein the host unit is coupled to an electrical source and
couples electrical power from the electrical source to
the accessory in response to the accessory being
received and housed by the host unit.

13. The method of claim **12** further comprising:
gating the electrical power from the electrical source to
the accessory by:
coupling the electrical power from the electrical source to
the accessory in response to determining that the acces-
sory is communicatively coupled to the host unit; and
decoupling the electrical power from the electrical source
to the accessory in response to determining that the
accessory is communicatively decoupled to the host
unit.

14. The method of claim **12** wherein coupling the elec-
trical power from the electrical source to the accessory is
performed further in response to determining that the acces-
sory has been authenticated via the host unit.

15. The method of claim **11** wherein determining the
distance is performed using one of an ultra-wide band
(UWB), radar, ultrasonic, or IEEE 802 communication
protocols.

16. The method of claim **11** further comprising:
receiving orientation data from the host unit and the one
or more additional host units; and
determining a physical orientation of the host unit and the
one or more additional host units based on the orien-
tation data,
wherein generating a floor plan for the building is further
based on the determined physical orientations of the
host unit and the determined physical orientations one
or more additional host units.

17. The method of claim **16** wherein each of the host unit
and the one or more additional host units include:
a magnetometer operating as a compass; and
an accelerometer configured to detect an orientation of the
host unit relative to a direction provided by the mag-
netometer,

wherein the orientation data includes the data received
from the magnetometer and the accelerometer.

18. The method of claim **16** wherein each of the host unit
and the one or more additional host units include:

a multi-antenna array configured to send and receive
communication data from multi-antenna arrays of the
one or more additional host units, wherein the orien-
tation of the host unit is based on a phase angle of
arrival of the communication data from the one or more
additional host units,

wherein the orientation data includes the data received
from the multi-antenna array.

19. A system comprising:

one or more processors;

a host unit configured to be coupled to a support structure
of a building and configured to:

receive and house an accessory; and

electrically couple to an electrical source,

the host unit including:

a power gating module, controlled by the one or more
processors, and configured to couple electrical power
from the electrical source to the accessory; and

a communication module, controlled by the one or
more processors, and configured to communicate
with one or more additional host units installed in the
building, wherein the communication module com-
municates by sending or receiving communication
data with the one more additional host units,

wherein the communication data is configured to cause
the one or more processors to:

determine a distance between the host unit and each
of the one or more additional host units based on
the communication with the one or more addi-
tional host units; and

determine a floor plan of the building based at least
on the distance from the host unit to each of the
one or more additional host units.

20. The system of claim **19** further comprising:

a self-orientation module, controlled by the one or more
processors, and configured to determine an orientation
of the host unit,

wherein the one or more processors further determine the
floor plan of the building based on the orientation of the
host unit.

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